Do physicians discuss HIV testing during prenatal care?

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ABSTRACT

OBJECTIVE To determine the frequency with which Hamilton, Ont, general practitioners and family physicians discussed and offered HIV testing during prenatal care.

DESIGN Cross-sectional mailed survey.

SETTING Family physicians' and general practitioners' offices in Hamilton, including group or solo private practices and community health centres.

PARTICIPANTS General practitioners and family physicians in Hamilton identified from the Ontario Medical Association and the 1995 *Canadian Medical Directory.* Two hundred forty-one practitioners were sent surveys; 25% had moved or no longer practised family medicine, and 65% (140 of 216) were returned.

MAIN OUTCOME MEASURE Frequency with which physicians discuss with and offer HIV testing to prenatal patients.

RESULTS Eighty percent of clinicians felt they understood their professional role in providing HIV testing, and more than 90% had referred female patients for HIV testing. Eight percent of physicians always discussed HIV when reviewing pregnancy care, and 5% always offered HIV testing to patients in the first trimester of pregnancy.

CONCLUSIONS Currently, few physicians discuss HIV testing with all their prenatal patients.

RÉSUMÉ

OBJECTIF Déterminer la fréquence à laquelle les omnipraticiens et les médecins de famille d'Hamilton, Ont., discutent et proposent le dépistage du VIH dans le cadre des soins prénataux.

CONCEPTION Enquête transversale par la poste.

CONTEXTE Cabinets des médecins de famille et des omnipraticiens d'Hamilton, y compris les pratiques solo et de groupe ainsi que les centres communautaires de santé.

PARTICIPANTS Omnipraticiens et médecins de famille d'Hamilton identifiés à partir du registre de l'Association médicale de l'Ontario et l'édition 1995 du *Canadian Medical Directory.* Le questionnaire a été envoyé à 241 praticiens ; 25 % étaient déménagés ou n'exerçaient plus la médecine familiale ; 65 % (140 sur 216) ont retourné le questionnaire complété.

PRINCIPALE MESURE DES RÉSULTATS Fréquence à laquelle les médecins discutent et proposent un dépistage du VIH dans le cadre des soins prénataux.

RÉSULTATS Quatre-vingt pour cent des cliniciens avaient le sentiment de comprendre leur rôle professionnel d'offrir le dépistage du VIH. Plus de 90 % avaient référé des patientes pour le dépistage du VIH. Huit pour cent des médecins discutaient toujours du VIH dans le cadre des soins prénataux et 5 % offraient systématiquement le dépistage du VIH pendant le premier trimestre de la grossesse.

CONCLUSIONS Actuellement, peu de médecins discutent du dépistage du VIH avec toutes leurs patientes dans le cadre des soins prénataux.

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Human immunodeficiency virus infection and acquired immune deficiency syndrome are illnesses of increasing importance for Canadian women.[1] Recent Ontario data reveal that 12% to 15% of newly diagnosed HIV-positive individuals are female.[2]

Canadian women who are HIV-positive are much more likely to have acquired the virus through unprotected sexual intercourse with men than from any other risk behaviour, such as needle use or blood transfusion.[1] In Canada, the women who are HIV-positive are primarily of childbearing age, and seroprevalence studies of HIV infection in delivering mothers demonstrated HIV infection rates of 2.8 per 10000 in Ontario,[3] 2.7 per 10000 in British Columbia,[4] and 6.1 per 10000 in Quebec.[5]

Mother to child HIV transmission rates range from 15% to 40%,[6] and most Canadian children with HIV acquired the virus in utero.[1] Recent evidence establishing that zidovudine therapy in the second and third trimester can decrease the transmission rate of HIV from mother to child from 25.5% to 8.3%[7] suggests we must consider offering HIV testing routinely to all pregnant mothers. Offering HIV testing permits women to establish their HIV status and allows them to make an informed decision about zidovudine therapy during their pregnancy. This recommendation is endorsed by numerous professional bodies and organizations, including the Canadian Paediatric Society,[8] the Chief Medical Officer of Health for Ontario,[9] the London (UK) Department of Health,[10] and the US Public Health Service.[11]

There is little information on the HIV testing practices of Canadian physicians for women, even though women are rapidly contracting HIV infection. Previous studies into physicians' HIV practice patterns for pregnant women were completed before strong evidence for zidovudine treatment in pregnancy became available,[12] and thus the imperative for offering testing to all pregnant women might not have been clear. This study was developed to evaluate the knowledge and practices of family physicians in Hamilton, Ont, about HIV testing for both pregnant and non-pregnant women. Establishing whether physicians are discussing and offering HIV testing to pregnant mothers is the first essential step in understanding how current recommendations and clinical information have influenced physician behaviour in this area.

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METHODS

A listing of all licensed general practitioners and family physicians in Hamilton was obtained from the Ontario Medical Association and from the 1995 *Canadian Medical Directory.* All physicians received two mailings of the survey in January and May 1996.

The survey assessed physicians' demographic characteristics, practice characteristics, and knowledge about HIV testing for women. The survey tool used primarily Likert scale ratings to collect information. Questions assessing HIV testing in pregnancy were embedded within the survey instrument. The survey was pretested on a convenience sample of local primary care physicians and was revised based on their feedback.

A χ^2 test and Student's t test were used where appropriate for data analysis. A P value of ≤ 0.05 was defined as statistically significant. Data analysis was completed using the Statistical Package for the Social Sciences for Windows.

The study was approved by the Quality Assurance and Research Committee of the North Hamilton Community Health Centre. Informed consent was obtained with voluntary return of the survey.

RESULTS

Surveys were sent to 241 family physicians and general practitioners. Twenty-five surveys were returned uncompleted, because the clinicians had moved or no longer practised family medicine. Eighty-seven were returned in the first mailing, and 53 in the second mailing, providing a response rate of 64.8% (140/216).

Mean age of responding practitioners was 45.4 years (SD = 10.4) and median number of years in practice was 15. Forty-four percent were female and 55.7% were male practitioners. Ninety-four percent of practitioners had, at some time, referred a female client for HIV testing (**Table 1**).

Most physicians (81.8%) reported they clearly understood their professional role in the provision of HIV testing for women. All physicians thought they had some knowledge of HIV and HIV testing, and more than 20% of these primary care practitioners rated their knowledge as very good or

Table 1. Demographic data (N = 140)

PHYSICIAN CHARACTERISTICS	N
AGE (YEARS)	
Mean	45.4 (SD = 10.4)
Median	44
Range	27-75
SEX	
Female	62 (44.3%)
Male	78 (55.7%)
YEARS OF MEDICAL PRACTICE	
Median	15
Range	1-52
EMPLOYMENT SETTING	
Health services organization	54 (38.8%)
Independent practice	39 (28.1%)
Group practice	34 (24.5%)
Community health centre	5 (3.6%)
Other	7 (5.0%)
NUMBER OF FEMALE PATIENTS PER MONTH	
10 to 80	18.8%
81 to 200	34.0%
More than 200	47.2%

excellent (21.7%). There was a statistically significant difference in the mean number of years of practice between clinicians who had rated their knowledge of HIV as fair and those who rated their knowledge as good, very good, or excellent (22.1 years in practice [SD = 10.2] versus 15.1 years in practice, respectively [SD = 11.1], *t* test, $P < 0.001$).

Clinicians reported that pretest HIV counseling took an average of 10.6 minutes (SD = 7.3) per female patient. Female physicians reported that they spent more time providing pretest counseling than their male colleagues (14.2 minutes [SD = 7.7] versus 7.5 minutes [SD = 5.1], *t* test, $P < 0.001$). Sixty-seven percent of clinicians believed more funding should be available for them to provide pretest and posttest counseling.

Information and educational material on HIV was available in 71.4% of offices, but 48.9% of primary care practitioners made this information available only to certain female patients.

Only 8.0% of clinicians reported that they always discussed HIV when reviewing pregnancy planning with their patients. Almost 40% of clinicians (54/137) stated that they never or rarely discuss HIV when reviewing pregnancy planning (**Table 2**). Clinicians who rated their knowledge of HIV as good, very good, or excellent were no more likely to sometimes or always discuss HIV when reviewing pregnancy care than those who rated their knowledge as fair (61.6% [95% confidence interval (CI): 53.5, 69.7] versus 55.6% [95% CI: 47.4, 63.8]; χ^2 [*df* 1] = 0.40, $P = 0.525$). Clinicians practising for less than 10 years were no more likely to sometimes or always discuss HIV during early pregnancy care than those who had been practising for more than 10 years (55.8% [95% CI: 47.6, 64.0] versus 63.5% [95% CI: 55.5, 71.5]; χ^2 [*df* 1] = 0.81, $P = 0.367$).

Only 5.2% (7/135) of physicians reported that they always offered HIV testing to patients in the first trimester of pregnancy. Eighty percent (108/135) never or rarely offered HIV testing in the first trimester. Physicians who rated their knowledge of HIV as good, very good, or excellent were more likely to sometimes or always offer HIV testing in the first trimester of pregnancy than those who rated their knowledge of HIV as fair (24.7% [95% CI: 17.6, 31.8] versus 8.3% [95% CI: 3.7, 12.9]; χ^2 [*df* 1] = 4.36, $P = 0.037$). Clinicians who had graduated within 10 years were no more likely to sometimes or always offer women HIV testing during pregnancy than those who had graduated more than 10 years ago (19.2% [95% CI: 12.7, 25.7] versus 20.5% [95% CI: 13.6, 27.4]; χ^2 [*df* 1] = 0.031, $P = 0.85$).

DISCUSSION

This study demonstrates that physicians understand themselves to have an important role in providing HIV testing and counseling to women and that most clinicians have referred female clients for HIV testing at some point. However, it also highlights the pressing need for education, stronger clinical recommendations, and use of effective measures[13] to influence practitioner behaviour to bridge the gap between current scientific developments concerning HIV and pregnancy and actual practice.

Practitioners continue to target women they perceive to be at high risk for HIV to receive HIV

education, information, and testing, rather than making the information and counseling available universally. Consequently, some women who are at risk will be overlooked, and other women will continue to face stigma by being labeled as members of high-risk groups. The concept of selective testing is even endorsed by the Society of Obstetricians and Gynaecologists of Canada in their policy statement on HIV testing during pregnancy.[14] They recommend screening for those thought to be at risk. Experience in the United States, where "targeted" counseling was initially endorsed, demonstrated that such an approach missed most women at risk.[15,16] Given the number of Canadian women who are engaged in the most common risk behaviour for HIV contraction (sexual intercourse with men), it is folly for physicians to assume that they are able to discern which women are at risk. All women deserve to be informed about HIV, so they can make their own decisions on testing and behaviour modification.

Pregnancy provides a unique opportunity to prevent transmission of HIV from mother to child. The screening test is exceptionally accurate,[17] and efficacious treatments exist to prevent transmission to fetuses.[7] Currently, practitioners might not be maximizing this opportunity because they do not know the significance of HIV for Canadian women and their own practice population, because they are unfamiliar with the effectiveness of zidovudine therapy in decreasing perinatal transmission, or because they are focused on other issues in prenatal care.

Neither a reported knowledge of HIV nor receiving medical training in the past 10 years, when HIV disease became significantly more prevalent, consistently influences a practitioner's likelihood of offering HIV testing during prenatal care. With fewer than 10% of physicians always broaching the topic of HIV in prenatal care and a similarly small number always offering HIV testing to pregnant patients, this issue clearly should be a health policy priority.

Costs

Discussing HIV testing with all pregnant women will have important implications for the health care system. Although the Canadian Medical Association has already produced[18] and evaluated[19] its counseling guidelines for HIV serologic testing, continued dissemination of these guidelines is required. Further education for physicians is needed, particularly addressing the unique aspects of HIV testing for women and the need for testing during pregnancy. Practitioner education combined with public education and modification of the current reminder tools used in prenatal care would facilitate discussion of HIV with every pregnant patient.

Direct and indirect costs of screening women for HIV in pregnancy are not insignificant. Clinicians will need to provide comprehensive pretest counseling and to explain the rationale, benefits, and consequences of HIV testing in the prenatal period. In the United Kingdom, where antenatal testing for HIV has been offered for several years, most patients require an additional 20 minutes of consultation time for pretest counseling.[20] An additional appointment is required to deliver the results of the test, and any women who test positive need to be immediately channeled toward appropriate care providers.

Table 2. Frequency of discussing and offering HIV testing during prenatal care

PHYSICIANS' PRACTICE	NEVER N (%)	RARELY N (%)	SOMETIMES N (%)	ALWAYS N (%)
Discuss HIV testing with patients (n = 137)	11 (8.0)	43 (31.4)	71 (51.8)	12 (8.8)
Offer testing to patients (n = 135)	52 (38.5)	56 (41.5)	20 (14.8)	7 (5.2)

In many settings, resources and care for pregnant women with positive results must be established. Also, a public education campaign and prenatal-specific information pamphlets are needed to complement universal voluntary screening.

The cost implications of universal HIV testing for pregnant women have been examined in the United States. If the United States established voluntary HIV testing in the prenatal period, Gorsky et al[21] predict savings between $38.1 million to $93.5 million per year. Mandatory HIV testing in the prenatal period, though predicted to save $320 million a year,[22] is not recommended. Many experts believe that forced testing will prevent women who think themselves to be at risk from seeking prenatal care, as they might fear the stigma and consequences of positive test results. Supportive patient-centred care is recommended, where women are provided with information and permitted to make an informed and voluntary choice regarding HIV testing. A brief cost-benefit analysis in the Canadian context was published recently by Bueckert,[23] who determined that voluntary screening for HIV during pregnancy would provide savings in Ontario.

Limitations

There are certain limitations to this study. Although this survey was conducted almost 2 years after information became available about the effectiveness of zidovudine therapy in preventing HIV transmission, provincial health recommendations to offer HIV testing universally during pregnancy had been made only 2 months before survey distribution. Perhaps low rates of discussion and offering of HIV testing reflect a natural lag between recommendation, dissemination, and subsequent changes in clinical practice.

Physicians surveyed practised in a metropolitan area of southern Ontario. The group that replied to the survey might not be representative of Canadian physicians or their practices and knowledge with respect to HIV testing and women. We have little information about the behaviour or practices of nonresponders, although information from the Ontario Physician Human Resources Data Centre (OPHRDC) reports that 37.7% of active general practitioners and family physicians are female and 62.3% are male. Median age is reported to be between 45 and 49 years.[24] We are also unable to verify how closely responders' reported practices correspond to their actual clinical practice.

It is possible that physicians were unable to articulate their rationale for their clinical practices in this survey (eg, obstetricians, rather than general practitioners, counsel patients about HIV testing in one town). Perhaps well-thought-out reasons justified the low rate of discussion of HIV testing for pregnant women. Despite these limitations, these results underscore the need for further physician and patient education, introduction of effective methods to modify practice, and clear direction from health policy bodies regarding HIV testing during pregnancy. ✤

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